



Year 2000

Business Process Continuity Contingency Plan

December 8, 1998

1. Introduction

The U.S. Department of Housing and Urban Development's (HUD) mission is "to help people create communities of opportunity." Every aspect of HUD's mission depends in some manner on information technology (IT). This dependency creates a new challenge as the IT industry faces a unique problem - a change of century. The change of century could result in failure of all automated processes on January 1, 2000 unless action is taken to prevent this problem.

Time is running out for solving the Year 2000 problem. Many federal agencies will not be able to renovate and fully test all of their mission critical systems and may face major disruptions in their operations. Systems that have been renovated and tested may also encounter unanticipated Year 2000 interruptions. The risk of failure is not limited to HUD's internal information systems. Many federal agencies also depend on information and data provided by their business partners, which include other federal agencies, state and local agencies, and private sector entities. Finally, every organization also depends on services provided by the public infrastructure, such as power, water, transportation, and voice and data telecommunications.

The scope of this effort is pervasive. The IT challenge is unlike any other because its scope is all-encompassing and its due date is unalterable. HUD is identifying the risks and threats to the continuity of business, acting to mitigate those risks and developing contingency plans to handle possible failures.

1.1 Purpose

The business continuity planning process focuses on reducing the risk of Year 2000 induced business failures. It attempts to ensure an agency's ability to produce a minimum acceptable level of outputs and services in the event of failures of internal or external mission critical information systems and services. It also links risk management and mitigation efforts to the agency's Year 2000 program and helps to identify alternate resources and processes needed to operate core business functions. While it does not offer a long-term solution to Year 2000 induced failures, a business continuity plan will help the agency to prepare for a potential crisis and will facilitate the restoration of normal service at the earliest possible time in the most cost-effective manner.

1.2 Use and Scope

The successful operation of HUD's core business functions depends heavily on complex information systems, a wide range of internal and external products and services, and the uninterrupted operations of the major information technology infrastructure.

The Business Process Continuity Contingency Plan (BPCCP) is a high-level plan that identifies broad areas of risk and general mitigation strategies and contingencies. For each core business function and key support process, risk mitigation strategies and contingency plans will work together to ensure that processes continue or resume with minimal impact to the customer and the Department. With risk mitigation strategies in place, the degree of risk decreases and the chances of needing to implement the contingency plan are reduced. The BPCCP will also identify areas where more detailed contingency plans are needed.

1.3 Assumptions

In developing the BPCCP, the following assumptions were made:

- HUD offices will be open for business on Monday, January 3, 2000.
- HUD will plan for business as usual in that all offices will be ready for the full range of business transactions.
- In the event that unexpected failures occur, HUD will immediately implement this BPCCP to ensure that HUD's business functions continue.
- For purposes of this document, it is presumed all efforts to ensure systems are Year 2000 capable have been made and all systems have been certified as compliant with HUD's Year 2000 standards.

1.4 Methodology

A team, composed of representatives from HUD Program Areas responsible for the conduct of core business functions, convened for the purpose of formulating a Year 2000 Business Process Continuity Contingency Plan. The team analyzed the core business functions and supporting infrastructure to identify risks or threats to providing uninterrupted service to HUD's customers.

The detailed contingency plans to be completed by September 1998 describe the specific steps HUD will take to ensure the continuity of the core business functions in the event of Year 2000 induced system failures. These plans will be reviewed quarterly to determine whether additional steps need to be identified and whether the identified steps are still feasible and valid. The heart of this document, the BPCCP, is the Risk Mitigation and Contingency Planning matrices located in *Section 4*. The following describes how the team developed the elements of the matrix.

Risk / Threat

For each core business function, the team determined which aspects would be at risk in the event of a system failure. These determinations became the risks and threats. The major systems supporting the functions were also identified.

Time Horizon to Failure

The team next identified the timeline to failure, i.e., the date when the core business function would not operate because of a Year 2000 problem. In many instances that date is the first calendar day or the first business day of 2000.

Business Priority

The business priority is derived from two factors: the risk assessment and impact of a failure on HUD's ability to continue to do business. These two factors are multiplied together to obtain the score. The overall business priority score determines the most critical areas to which resources should be applied to prepare for a potential failure.

Risk assessment is the analysis of exposure to fraud or loss in the event of the inability of mission critical systems to process. This includes loss of provision of essential services, loss of income, loss of HUD-owned properties due to foreclosure for non-payment of taxes, loss of ancillary income from investment of direct income and ability to conduct fraudulent activities due to HUD systems' inability to perform analysis. Risk assessment is expressed as a probability on a scale of 0 to 1.0 with 1.0 equating to certainty.

Impact reflects the degree of damage to HUD's ability to deliver service to its customers if failure occurs. The following three factors contribute to determining the degree of impact: the effect on the customer and business operations; the number of customers who would be affected; and whether the failure would cause an immediate effect on a customer, a delayed effect, or no effect. The numeric range of values is from 1 to 10. The higher the value, the more negative the impact on service delivery.

Risk Mitigation Strategy

The risk mitigation strategy with corresponding milestone dates and action components is actions to be taken to reduce the impact of risk. These actions will be taken between now and the time horizon to failure to mitigate the identified risks. They are drawn from actions identified by the BPCCP team.

Contingency and Triggers

The contingency and triggers element of the matrix identifies the events that set the contingency plan in motion. Detailed existing plans and plans under development within each Program Area are referenced. The described actions trigger the activities needed to resume normal operations.

2. Organization

2.1 Business Continuity Strategy

HUD's strategy for ensuring readiness for the Year 2000 centers around the core business functions and the key supporting processes. Planning for business continuity provides a prudent response to critical business risks that cannot be put to rest until all mission critical dependent computer systems have been shown to be operationally stable and free of Year 2000 problems.

The business risks to HUD stem from the potential failure of both internal and external information systems. For example, recipients of grants and subsidies will not be able to receive funds if HUD's systems that support these functions fail. They will also not be able to receive these funds if HUD's systems are operational but the U.S. Department of Treasury's systems are not. Currently, all of HUD's funds are disbursed via Treasury, and accordingly, a major component of the BPCCP is to provide alternatives for funds disbursement.

HUD has analyzed its core business functions to identify the risks or threats to providing uninterrupted service and has devised plans to be activated should a failure occur. HUD has determined that it is not feasible to perform manual processing for most mission critical functions in the event of system failures. Therefore, the focus of the BPCCP is the resumption of computer processing based on impact to the ultimate customer.

2.2 Roles and Responsibilities

HUD's Year 2000 Project Manager and staff have developed a comprehensive Year 2000 strategy for the Agency that is being closely monitored for progress and achievement. In addition, a Business Process Continuity Contingency Planning team was established to develop contingency plans for continuing HUD's business operations in the event of a Year 2000 related disruption. This team developed the BPCCP by identifying and defining the risks and threats within each core business function and designating the Program Area or Center responsible for dealing with the contingency. It developed risk mitigation strategies and milestones and developed high level plans for return to normal operations. As team discussions proceeded, it became apparent that Program Area contingency plans needed to be developed and put in place for those Program Areas performing a critical role in the core business functions.

HUD Program Area	Program Area Contingency Planning Responsibility
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Office of Housing	Develop the Business Process Continuity Contingency Plans for field offices, teleservice centers, program service centers and central operations components, which comprise standard procedures to be followed throughout the nation's operations structure.
Office of Fair Housing and Equal Opportunity	Develop the Business Process Continuity Contingency Plans for Fair Housing offices including HUD's Center and Sites, which perform all major responsibilities mandated by civil rights laws.
Office of Public and Indian Housing	Develop the Business Process Continuity Contingency Plans for potential Year 2000 failures concerning PIH Housing Authorities and Tribally Designated Housing Entities.
Office of Community Planning and Development	Develop the Business Process Continuity Contingency Plans for support of housing infrastructure and related welfare of states and communities.
Government National Mortgage Association (Ginnie Mae)	Develop the Business Process Continuity Contingency Plans for making principal and interest payments to investors.
Real Estate Assessment Center	Develop the Business Process Continuity Contingency Plans to assess proper maintenance of HUD approved housing.
Enforcement Center (EC)	Develop the Business Process Continuity Contingency Plans for the Enforcement Center (EC) satellite offices and headquarters that comprise standard procedures to be followed should the EC and/or its business partners lose the availability of automated computer systems.
Office of General Counsel	The OGC would be available as issues are identified to provide assistance and guidance. This office would also develop the Business Process Continuity Contingency Plans for OGC applications. In the event any OGC application fails as the result of year 2000, OGC will revert to manual processing of cases filed by or against HUD until the electronic access becomes available.

Office of the Chief Financial Officer	Develop the Business Process Continuity Contingency Plans to process payments should the CFO and/or its business partners lose the availability of automated computer systems.
Office of Administrative and Management Services	Develop the Business Process Continuity Contingency Plan for potential Year 2000 failures concerning utilities, voice telecommunications, embedded utility systems, and mail and package processing.
Office of Chief Procurement Officer	Develop the Business Process Continuity Contingency Plan for headquarters and field contracting offices that comprise standard procedures to be followed should automated computer systems fail.
Office of Human Resources	Develop the Business Process Continuity Contingency Plan for ensuring payroll will continue with the National Finance Center.
Computer Services Group	Support the Business Process Continuity Contingency Plans for voice and data telecommunications and HUD's two computer centers' potential Year 2000 failures.
Systems Engineering Group	Develop the Business Process Continuity Contingency Plans for handling a transition from a manual to an automated process before and after normal operations are in jeopardy.

In addition, the Deputy Secretary will establish Business Resumption Teams to be activated in the event of a system failure. Each team will be responsible for a particular system's core business area and for carrying out a previously developed action plan.

3. HUD Primary Business Functions

HUD's primary business functions depend on a complex infrastructure that is crucial to its ongoing operations. Power, data and voice telecommunications, along with the Agency's computer hardware and software, are essential to ensuring HUD's business functions continue uninterrupted. These automated systems are the means by which HUD is able to provide service on demand to the public, the Agency client population, other government entities, large and small corporations, and individual businesses.

3.1 Description of Primary Business Functions

HUD has four primary business functions:

- Underwrite and Service Insurance;
- Administer Grants and Subsidies;
- Enforce Fair Housing and Equal Housing Opportunities;
- Provide Secondary Market for Government Insured and Guaranteed Loans.

3.1.1 Underwrite and Service Insurance

When HUD issues insurance to homeowners, four main actions take place.

- Underwrite Insurance

HUD insures mortgage loans under a contract of mortgage insurance with a HUD-approved mortgagee for single-family homeowners, multifamily project development.

To underwrite Federal Housing Administration (FHA) insurance, HUD is responsible for gathering information about the borrower's credit and value of the property. The credit and property are then scored to evaluate the risk of extending the insurance policy. This process ultimately determines whether the policy will be extended.

To underwrite a mortgage loan under a contract of mortgage insurance with a HUD-approved mortgagee, HUD limits the lender's risk.

- **Service Insurance**
HUD sends out a monthly bill to the loan servicer of mortgage insurance premiums due on policies. To accomplish this task, an accurate record must be maintained of all lenders and their account activity.
- **Terminate Insurance**
Insurance may be terminated in one of three ways. First, a borrower could carry the loan to maturity. Second, a borrower may prepay or refinance the loan. Third, the home may be foreclosed on. If a loan is prepaid or refinanced, HUD may make a refund of unearned premium to the borrower. If a borrower defaults, a payment of a claim against the insurance policy must be made to the lender who is the current holder of the loan.
- **Manage Property**
In some cases, when a HUD insured property goes to foreclosure, HUD becomes the owner of the property. HUD manages these properties while proceeding to sell them. In some cases, HUD agrees to become the mortgagee and has a small portfolio of loans for which the borrower makes the monthly payments directly to HUD.

3.1.2 Administer Grants and Subsidies

There are three main actions that take place when HUD provides services to residents.

- **Provide Rental Assistance, including Operating Subsidy, to HUD Approved Agents**
HUD makes subsidy payments to owners and to mortgagees in the case of some project based subsidies. Voucher payments are made directly to tenants.
- **Conduct Physical and Financial Assessment of HUD Properties**
Part of HUD's mission is to monitor and assess the condition of properties and the performance of entities managing those properties in which HUD has an interest.
- **Provide Grants**
HUD administers grant programs that help communities plan and finance their growth and development, increase their capacity to govern, and provide shelter and services for homeless people. Some of the primary recipients of grants from HUD are nonprofit organizations focusing on the elderly and disabled, and government

entities focusing on housing and infrastructure related to housing.

3.1.3 Enforce Fair Housing and Equal Housing Opportunities

There are two main enforcement activities concerning FHEO:

- **Restore and Maintain the Public's Trust**
Fair Housing and Equal Opportunity (FHEO) develops and implements programs for fair housing, community development and facilities, equal opportunity in housing, economic development opportunities and other civil rights matters in compliance with federal civil rights laws. For instance, FHEO administers the implementation of standards for the design, construction and alteration of housing and other buildings to meet the Department's accessibility requirements. It also increases opportunities for business, training and employment for lower-income persons residing in the metropolitan area of a HUD-assisted project. FHEO ensures that HUD programs and legislative proposals support fair housing and provide benefits and participation without discrimination.
- **Conduct Fair Housing Education and Outreach Programs**
FHEO awards and manages Fair Housing Initiative Program (FHIP) grants and represents the Department with national housing industry groups, financial institutions and associations, and other organizations to provide greater access to housing for all people.

There are four main enforcement activities concerning the Enforcement Center.

- **Ensure Compliance with HUD Legal Agreements and Statutes**
The Enforcement Center (EC) was created to take severe and immediate action against owners, landlords, recipients, grantees and participants who are in non-compliance or in violation of statutes, regulations or other requirements relating to the programs administered by HUD.
- **Undertake Immediate and Necessary Enforcement and Compliance Actions to Rectify Emergency Conditions**
Principal staff can recommend to the Enforcement Center projects in distress which need immediate attention. The Enforcement Center will review the referral to determine if it is an "emergency" enforcement case that warrants the expenditure of Enforcement Center resources. Types of situations that can be classed as "emergencies" may include a multifamily project that has a fire, a toxic waste problem, an explosion or a natural disaster that requires

resident relocation.

- **Investigate Program Offices' Complaints and Requests for Intervention**
There are six primary sources of referrals to the Enforcement Center: the Assessment Center, PIH Receivership, PIH Troubled Agency Recovery Centers (TARCS), Principal Staff, CPD staff and FHEO. The Center will review any referrals and initiate appropriate enforcement action for breach of grant agreements or violation of governing statutes and regulations.
- **Initiate Debarment and Suspension Actions and Manage Limited Denial of Participation (LDP) Appeals**
The Program Compliance Division of the Enforcement Center will be responsible for HUD-wide handling of debarments, suspensions, appeals of Limited Denials of Participation (LDPs) and appeals of denials of participation stemming from the Previous Participation process. Suspensions and debarments are actions taken by HUD to limit or reduce a participant's access to HUD resources. Consolidation of the HUD sanction processes will be a critical role of the EC as it will be able to take prompt and effective action against those who abuse any of HUD's programs.

3.1.4 Provide Secondary Market for Government Insured and Guaranteed Loans

There are two main programs the Government National Mortgage Association (Ginnie Mae) supports.

- **Ginnie Mae Mortgage-Backed Securities Program**
The role of Ginnie Mae as a Federal corporation within HUD is to support the government's housing objectives by establishing secondary market facilities for residential mortgages, using private capital to the maximum extent feasible. Through its Mortgage-Backed Securities (MBS) program, Ginnie Mae increases the overall supply of mortgage credit available for housing by providing a vehicle for channeling funds from the securities markets into the mortgage market.
- **Ginnie Mae Multiclass Securities Program**
The Ginnie Mae Multiclass Securities program provides an important adjunct to Ginnie Mae's secondary market activities. The two programs under this area are the Real Estate Mortgage Investment Conduit (REMIC) and the Platinum program. Ginnie Mae guarantees, with the full faith and credit of the United States,

the timely payment of principal and interest on Ginnie Mae REMICs and Ginnie Mae Platinum securities.

3.2 Key Support Processes

Key support processes fall into two major categories: Administrative and Management Information Systems and Information Technology Infrastructure.

3.2.1 Administrative and Management Information Systems

In addition to HUD's core business functions, the Agency relies on a variety of administrative processes to ensure the continuity of its operations. Such support processes include, but are not limited to, payroll operations (i.e., the time and attendance system), workload tracking and control systems, financial operations including procurements and bill paying, employee health and safety services, building operations, and any number of other systems and processes pertaining to continuing operations.

3.2.2 Information Technology Infrastructure

HUD relies on an information technology infrastructure to support virtually all of its programmatic, administrative and management information processes. The infrastructure comprises the Agency's processors (hardware), systems software and telecommunications systems, as well as its facilities, transportation, uninterruptable power supply (UPS) services, and general business continuity (back-up and recovery) processes that exist independent of Year 2000 issues.

3.3. Dependencies

Given full Year 2000 compliance of HUD's core business functions and key support processes, the Agency will still rely on the compliance of other federal, state and local agencies as well as the private sector. All commercial-off-the-shelf (COTS) software must be certified to be Year 2000 compliant, and data exchanges outside the Agency need to be compliant. For example, the U.S. Treasury, Federal Reserve and Automated Clearing House are responsible for making financial disbursements each month to claims and unearned income recipients by printed check and electronic funds transfer. The large employers that submit wage reports electronically or on magnetic media need to use software and systems that are Year 2000 compliant to generate the data. The same holds true for the Program Areas and other government agencies that regularly exchange data with HUD – the Internal Revenue Service, the U.S. Treasury and the Social Security Administration to name a few.

In addition, the number of common devices that have an impact on day-to-day operations is enormous. These devices rely on embedded chips that may be affected by the Year 2000 change. Some of these that directly affect HUD's customers are the microchip-based systems that control the heating, ventilation, lighting and security systems. These common devices may be crucial if a Year 2000 failure occurs because of the time of year. New England residences without heat and inner-city housing developments without appropriate security are primary sources of concern. Any Year 2000 failure which occurs with these common devices may well be highlighted by the media as HUD's inability to care for its customers.

Public utilities, over which the Agency has no control, are vital to continued operations. These include electrical power that feeds all HUD facilities and telephone lines, which are basic to providing voice and data communication services. Year 2000 compliance of these utilities is no less important than the Year 2000 compliance of HUD's internal systems.

4. Matrices

The following matrices represent the core of the BPCCP. The manner of their development is described in section 1.4, *Methodology*.

Primary Business Function: Underwrite and Service Insurance
Responsible Group(s) - Housing, PIH

4.1 Action: Underwrite Insurance

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.1.1	Lender is unable to originate new loans due to lack of access to the following major automated systems which underwrite insurance: CHUMS (F17), SFPCS (A80R) and DAP (F24A) or due to a Year 2000 failure within Ginnie Mae or Treasury. If this occurs, homeowners won't be able to get homes and FHA could lose ability to generate income due to loss of credibility as a service provider.	1/3/2000	.8	10	8	1. Complete renovations of all software used to underwrite insurance. 2. Develop Y2K Contingency Plan. 3. Establish the Business Resumption Team for the insurance underwriting process.	Sep 1998 Sep 1998 Mar 1999	1. In the event automated support is unavailable due to Year 2000 failures, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing of insurance underwriting will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Underwrite and Service Insurance
Responsible Group(s) - Housing

4.1 Action: Underwrite Insurance

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.1.2	Developer cannot complete construction of multifamily project due to inability to receive payment for work because of lack of access to DAP (F24A), LAS (A21), PAS (A96) and LOCCS (A67).	1/3/2000	.8	8	6.4	1. Complete renovations of all software used to pay developers to complete construction of multifamily projects. 2. Develop Y2K Contingency Plan. 3. Establish the Business Resumption Team for the construction of multifamily projects.	Sep 1998 Sep 1998 Mar 1999	1. In the event automated support is unavailable due to Year 2000 failures, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing of payments for construction of multifamily projects will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Underwrite and Service Insurance
Responsible Group(s) - PIH

4.1 Action: Underwrite Insurance

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.1.3	Office of Native American Programs guarantees mortgage loans for construction or purchase of homes on Indian reservations or other areas where conventional lending and insurance institutions are unable to operate due to limitations on foreclosure and sale of properties on Indian land. This is a relatively small program to date, but due to the distances involved, the program is heavily dependent on electronic communications. If HUD could not pay claims, the lender would be at risk of inability to extend other loans to continue business.	2/1/2000	.2	2	.4	1. Complete renovations of all software used to approve mortgage loans and related systems. 2. Develop Y2K Contingency Plan. 3. Establish the Business Resumption Team for the Office of Native American Programs mortgage loan approval process.	Sep 1998 Sep 1998 Mar 1999	2. In the event systems supporting mortgage loan guarantees are unable to provide automated support due to Year 2000 date problems, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing of mortgage guarantee loans will be suspended until corrections are made. 3. Program could continue to operate on paper-based procedures, although speed and efficiency would be reduced. 4. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Underwrite and Service Insurance
Responsible Group(s) - Housing

4.2 Action: Service Insurance

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.2.1	HUD is unable to service existing portfolio due to lack of access to major automated systems: SFIS (A43I) and MFIS (F47) or Treasury. This inability leads to the risk that HUD cannot receive monthly premiums, invest those premiums or receive the income from the investments.	2/1/2000	.8	9	7.2	1. Complete renovations of all software used to service existing portfolio of insurance policies. 2. Develop Y2K Contingency Plan. 3. Establish the Business Resumption Team to handle existing insurance policies.	Sep 1998 Sep 1998 Mar 1999	1. In the event automated support is unavailable due to Year 2000 failures, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing of existing portfolios will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Underwrite and Service Insurance
Responsible Group(s) - Housing

4.3 Action: Terminate Insurance

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.3.1	HUD is unable to pay claims due to Year 2000 related problems with automated systems. Therefore, the lender cannot issue new loans due to funds obligation. SFIS (A43I), CLAIMS (A43C) and MFIS (F47) are the major automated systems supporting the claims process along with Treasury.	1/3/2000	.5	9	4.5	1. Complete renovations of all software used to pay claims to the lender. 2. Develop Y2K Contingency Plan. 3. Establish the Business Resumption Team to handle payment of claims.	Sep 1998 Sep 1998 Mar 1999	1. In the event automated support is unavailable due to Year 2000 failures, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing of payment of claims to the lender will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Underwrite and Service Insurance
Responsible Group(s) - Housing

4.3 Action: Terminate Insurance

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.3.2	HUD is unable to pay refunds due to Year 2000 related problems with automated systems. Therefore, the homeowner must wait for refund from HUD. DSRS (A80D) is the major automated system supporting the refunds process along with Treasury.	2/1/2000	.5	5	2.5	1. Complete renovations of all software used to pay refunds. 2. Develop Y2K Contingency Plan. 3. Establish the Business Resumption Team to handle payment of refunds.	Sep 1998 Sep 1998 Mar 1999	1. In the event automated support is unavailable due to Year 2000 failures, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing of payment of refunds to the homeowner will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Underwrite and Service Insurance
Responsible Group(s) - Housing

4.4 Action: Manage Property

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.4.1	HUD owns mortgages with existing owners but cannot receive monthly payments from the borrowers while mission critical collection system, SFMNS (A80N), lockboxes or interfaces are not functioning. The threat to HUD is not receiving the income from the homeowner when the system is operational again.	2/1/2000	.7	7	4.9	1. Complete renovations of all software used to manage monthly payments of mortgages. 2. Develop Y2K Contingency Plan. 3. Establish the Business Resumption Team to handle collection of mortgage payments.	Sep 1998 Sep 1998 Mar 1999	1. In the event automated support is unavailable due to Year 2000 failures, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing of mortgage payments will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Underwrite and Service Insurance
Responsible Group(s) - Housing

4.4 Action: Manage Property

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.4.2	HUD owns property that has been foreclosed on and cannot pay taxes on the property because the major automated system SAMS (A80S) and/or the disbursement system, and/or Treasury are not functioning properly. The threat HUD faces is that the states could foreclose on the property causing HUD to lose proceeds on future sales.	2/1/2000	.1	5	.5	1. Complete renovations of all software used to manage property. 2. Develop Y2K Contingency Plan which explores a legal / legislative agreement to be established that prevents states/localities from foreclosing on properties when taxes cannot be paid due to unusual circumstances. 3. Establish the Business Resumption Team to handle management of property.	Sep 1998 Sep 1998 Mar 1999	1. In the event automated support is unavailable due to Year 2000 failures, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing of property management will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Administer Grants and Subsidies
Responsible Group(s) - CFO, PIH, CPD and Housing

4.5 Action: Provide Rental Assistance, including Operating Subsidy, to HUD Approved Agents

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score		Milestone Dates	
						Mitigation Strategy		
4.5.1	<p>Recipients cannot receive payment from HUD because mission critical systems or external partners that provide these payments are not functioning. These systems are TRACS (F87), AFS (F89A), PAS (A96), LOCCS (A67), HUDCAPS (A75), LAS (A21) and Treasury. The primary parties within this category most affected by HUD's inability to make payments are HUD approved landlords and recipients of subsidies, loans and grants.</p> <p><i>(Although this section is titled, <u>Provide Rental Assistance, including Operating Subsidy, to HUD Approved Agents</u>, this topic also covers grants. It will only be written once, but is to be addressed in both sections.)</i></p>	1/3/2000	.9	10	9	<p>1. Develop Y2K Contingency Plan that explores three key items: a.) Alternative methods to make payments; b.) Length of time before tenant or service providers are at risk; c.) Timing of payments to landlords (making them early).</p> <p>2. Complete renovations of all software used to issue payments to HUD approved recipients.</p> <p>3. Establish the Business Resumption Team to address the inability of HUD to pay approved recipients.</p>	<p>Sep 1998</p> <p>Sep 1998</p> <p>Mar 1999</p>	<p>1. In the event payments cannot be made due to a lack of automated support because of Year 2000 date problems, the Business Resumption Team will analyze the problem, make corrections and retest immediately.</p> <p>2. Automated processing of payments will be suspended until corrections are made.</p> <p>3. The Business Resumption Team will implement the Year 2000 Contingency Plan.</p>

Primary Business Function: Administer Grants and Subsidies
Responsible Group(s) - CFO, PIH, CPD and Housing

4.5 Action: Provide Rental Assistance, including Operating Subsidy, to HUD Approved Agents

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.5.2	Without an electronic processing capacity, HUD would be unable to manage Section 8 Tenant-based payments to Public Housing Authorities, landlords or agents in a timely way. If the automated processing capacity were to fail at the end of a calendar month, rent assistance payments due on the 1 st could be delayed, and some property managers could commence eviction procedures. By design, these programs are heavily dependent on electronic processing because of the large number of transactions. There are five systems which support processing of Section 8 Tenant-based	1/6/2000	.6	10	6	<p>1. HUDCAPs is mainframe-based and operated by a contractor who is responsible for providing HUD-approved back-up and disaster-recovery capacities. In addition to the primary processing mainframe, the contractor has back-up processing capacity.</p> <p>2. Contractor provides daily data downloads, sorted or screened according to HUD-specified criteria, which assure that HUD has back-up data on approved payment schedules.</p> <p>3. Complete renovations of all software used to provide payments to HUD approved landlords and related</p>	<p>Jun 1998</p> <p>Developed with contract</p> <p>Sep 1998</p>	<p>1. If limitations on processing capacity are localized, HUD has the capacity to re-allocate access rights to facilitate remote processing; a field office could be authorized to process another region's workload.</p> <p>2. Timing of computer capacity loss is critical; if it were lost early in the month, there would not be serious impacts until the last few days of the month when the next month's payments are due out, and there could be a two or three week window for recovery.</p> <p>3. In the event HUDCAPs, PAS or LOCCS are</p>

	Payments. TRACS (F87) administers Section 8 Program. HUDCAPs (A75) reserves funds in support of Section 8. PAS (A96) and LAS (A21) contract the funds. LOCCS (A67) disburses the funds.					systems.		unable to provide automated support for Section 8 Tenant-based payments due to Year 2000 date problems, the Business Resumption Team will analyze the problem, make corrections and retest immediately.
						4. Develop Y2K Contingency Plan.	Sep 1998	
						5. Establish the Business Resumption Team for the landlord approved payment process.	Mar 1999	
								4. Automated processing of Section 8 Tenant-based payments will be suspended until corrections are made.
								5. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Administer Grants and Subsidies
Responsible Group(s) - PIH

4.5 Action: Provide Rental Assistance, including Operating Subsidy, to HUD Approved Agents.

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.5.3	Without electronic data processing support, Headquarters Financial Management Division would be unable to verify Housing Agencies' eligibility for operating subsidies, as determined on the basis of field office inputs to ROBOTS (NO7), the major automated system supporting this tracking process. The Department could end up paying subsidy amounts different from that for which a Housing Agency is actually eligible based on statutory formulae, resulting in illegal distributions of appropriated funds (such as a possible Anti-Deficiency Act violation), illegal expenditures by the Housing Authorities, inability of short-changed Housing Authorities to make legitimate disbursements, or any combination of the above.	2/1/2000	.6	8	4.8	1. Develop Y2K Contingency Plan which would include the possibility that PIH could operate with written reports from the field offices as was done before the advent of ROBOTS. 2. Complete renovations of all ROBOTS software. 3. Establish the Business Resumption Team to support ROBOTS program.	Sep 1998	1. In the event ROBOTS is unable to provide automated support to the subsidy eligibility process due to Year 2000 date problems, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing of subsidy funding will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Administer Grants and Subsidies
Responsible Group(s) - REAC

4.6 Action: Conduct Physical and Financial Assessment of HUD Properties

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.6.1	<p>HUD is unable to collect and process inspection data from the field using a data collection device (DCD) to automatically provide physical and financial assessments.</p> <p>Data will be delayed to all primary users; therefore, the risk is twofold. First, HUD would not be able to assess proper maintenance of HUD-approved housing. Second, tenants would be in danger of living in unacceptable conditions.</p>	1/1/2000	.8	8	6.4	<p>1. Complete renovations of all software used to collect and process inspection data.</p> <p>2. Develop Y2K Contingency Plan.</p> <p>3. Establish the Business Resumption Team to collect and process inspection data.</p>	<p>Sep 1998</p> <p>Sep 1998</p> <p>Mar 1999</p>	<p>1. In the event the software used to support the data collection process is unable to provide automated support due to Year 2000 date problems, the Business Resumption Team will analyze the problem, make corrections and retest immediately.</p> <p>2. Data will be processed manually.</p> <p>3. Automated processing of inspection data will be suspended until corrections are made. All users will receive data once REAC has resumed automated processing.</p> <p>4. The Business Resumption Team will implement the Year 2000 Contingency Plan.</p>

Primary Business Function: Administer Grants and Subsidies
Responsible Group(s) - Housing

4.7 Action: Provide Grants

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.7.1	The Housing Program Area administers grants to nonprofit agencies which focus that revenue on housing projects for elderly and disabled. If the automated systems, DAP (F24A), PAS (A96), LAS (A21) and LOCCS (A67) were inoperable due to Year 2000 automated problems, HUD would not be able to allocate these funds to the appropriate recipients of the grants. In turn, the nonprofit organizations could lose money, which would not be reimbursed, as they covered the costs incurred during the lag in grant disbursement.	1/3/2000	.8	5	4	1. Complete renovations of all systems related to Housing grant disbursements. 2. Develop Y2K Contingency Plan. 3. Establish the Business Resumption Team for Housing grants.	Sep 1998 Sep 1998 Mar 1999	1. In the event the systems the Housing Program Area depends on for grant disbursement are unable to provide automated support due to Year 2000 date problems, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing of grant funding will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Administer Grants and Subsidies
Responsible Group(s) - CPD

4.7 Action: Provide Grants

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.7.2	CPD administers grants to government entities which focus that revenue on housing and infrastructure related to housing. If the automated system, IDIS (C04) was down, HUD would not be able to allocate these funds to the appropriate recipients of the grants.	1/3/2000	.8	5	4	1. Complete renovations of the IDIS system and all related systems. 2. Develop Y2K Contingency Plan. 3. Establish the Business Resumption Team for CPD grants.	Sep 1998 Sep 1998 Mar 1999	1. In the event the IDIS is unable to provide automated support for the grant process due to Year 2000 date problems, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing of grant funding will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Administer Grants and Subsidies
Responsible Group(s) - PIH

4.7 Action: Provide Grants

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.7.3	If electronic communications and processing capacity were impaired, proposed Indian Housing Block Grant plans could go into effect by default. Indian Housing Plans are expected to be developed and submitted electronically, and the underlying statute expressly provides that plans not disapproved within 60 days of receipt are considered approved. HUD's capacity to review and approve use of funds would be severely compromised and funding would be provided under LOCCS (A67).	1/17/2000	.5	6	3	1. Develop Y2K Contingency Plan which will consider developing a back-up processing capacity on a free-standing computer, but this option depends on cost. The Office of Native American Programs is reviewing the options. 2. Complete renovations of all software used to support Indian Housing Block Grant program. 3. Establish the Business Resumption Team to support Indian Housing Block Grant program.	Sep 1998 Sep 1998 Mar 1999	1. If automated Indian Housing Block Grant systems are not functioning due to Year 2000 failures, the Business Resumption Team will carry out two actions: 1.) Request hard copies of the plans. 2.) Analyze the problem, make corrections and retest immediately. 2. Automated processing requests will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Administer Grants and Subsidies
Responsible Group(s) - PIH

4.7 Action: Provide Grants

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.7.4	There are two potential risks involved if the automated system, IBS (N31) fails due to Year 2000 problems. HUD would be unable to determine which Public Housing Authorities are eligible for funding for modernization of aging PHA-owned units, and the Department would be unable to allocate funds for this purpose.	3/31/2000	.4	6	2.4	<p>1. Complete renovations of all modernization funding software and related systems.</p> <p>2. Develop Y2K Contingency Plan. The plan will choose among three alternatives: 1.) PC-based back-up system; 2.) Lock-in allocation factors at a date-certain prior to 12/30/99 and not permit subsequent adjustments; or 3.) Fall back on previous year's allocation factors.</p> <p>3. Establish the Business Resumption Team for the modernization funding process.</p>	<p>Sep 1998</p> <p>Sep 1998</p> <p>Mar 1999</p>	<p>1. In the event the IBS is unable to provide automated support to the modernization funding process due to Year 2000 date problems, the Business Resumption Team will analyze the problem, make corrections and retest immediately.</p> <p>2. Automated processing of modernization funding will be suspended until corrections are made.</p> <p>3. The Business Resumption Team will implement the Year 2000 Contingency Plan.</p>

Primary Business Function: Promote and Enforce Fair and Equal Housing
Responsible Group(s) - Enforcement Center

4.8 Action: Enforce Fair Housing and Equal Housing Opportunities

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.8.1	HUD cannot initiate debarment or suspension actions or issue Limited Denial of Participation (LDPs) due to the non-availability of the Enforcement Center (EC) Departmental Tracking and the EC Program Compliance Systems.	1/3/2000	.3	10	3	1. Complete renovations of all software used to initiate debarment or suspension actions or issue LDPs. 2. Develop Y2K Contingency Plan. 3. Establish the Business Resumption Team to handle debarment or suspension actions and to handle LDPs.	Sep 1998 Sep 1998 Mar1999	1. In the event the software used to initiate or issue debarment/suspension or LDPs is unable to provide automated support due to Year 2000 date problems, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing of EC Departmental Tracking and Program Compliance systems will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Promote and Enforce Fair and Equal Housing
Responsible Group(s) - FHEO

4.8 Action: Enforce Fair Housing and Equal Housing Opportunities

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.8.2	HUD is unable to investigate and resolve complaints filed under the Authority of Title VIII, Title VI, Section 109, Section 504 and A.D.A. Those affected will be citizens who either have filed discrimination complaints or those who file complaints under these authorities. They will be affected in that, while the systems are unavailable, their complaint processing will be slower and less efficient.	1/3/2000	.3	10	3	1. Complete renovations of all software, including REMS, used to resolve requests by Program Offices to pursue compliance violations or ensure that all program participants are in compliance with HUD agreements and statutes. 2. Develop Y2K Contingency Plan. 3. Establish the Business Resumption Team to handle enforcement requests from Program Offices.	Sep 1998 Sep 1998 Mar 1999	1. Related system Y2K problems will be corrected, tested and implemented upon Y2K approval. 2. In the event that software systems are unable to support this business function, automated processing will be suspended and staff will resort to a paper process until system problems are corrected. This method is significantly less efficient but facilitates the process in the interim. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Promote and Enforce Fair and Equal Housing
Responsible Group(s) - Enforcement Center

4.8 Action: Enforce Fair Housing and Equal Housing Opportunities

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.8.3	HUD is unable to resolve requests by Program Offices to pursue compliance violations or ensure that all program participants comply with HUD agreements and statutes due to lack of access to major automated systems such as REMS (F24D).	1/3/2000	.3	9	2.7	1. Complete renovations of all software, including REMS, used to resolve requests by Program Offices to pursue compliance violations or ensure that all program participants are in compliance with HUD agreements and statutes. 2. Develop Y2K Contingency Plan. 3. Establish the Business Resumption Team to handle enforcement requests from Program Offices.	Sep 1998 Sep 1998 Mar 1999	1. In the event the software used to resolve requests to pursue compliance violations is unable to provide automated support due to Year 2000 date problems, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing of REMS and related systems will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Primary Business Function: Provide Secondary Market for Government Insured and Guaranteed Loans
Responsible Group(s) - Ginnie Mae

4.9 Action: Provide Secondary Market for Government Insured and Guaranteed Loans

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.9.1	If Ginnie Mae's systems used to support actions carried out by the issuer of Mortgage Backed Securities, (MBS), are down due to Year 2000 problems, the issuer may not be capable of making principal and interest payments to investors.	1/15/2000	.7	5	3.5	1. Complete renovations of all software used to support issuers of mortgage-backed securities. 2. Develop Y2K Contingency Plan. 3. Establish the Business Resumption Team to handle issues pertaining to mortgage-backed securities.	Sep 1998 Sep 1998 Mar1999	1. In the event the software used to pay investors of mortgage-backed securities is unable to provide automated support due to Year 2000 date problems, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing of these systems will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Key Support Processes
Responsible Group(s) - OHR

4.10 Process: Administrative and Management Information Systems

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.10.1	Failure of National Finance Center (NFC) Payroll Processing. This would result in potential inability to pay employees.	1/21/2000	.9	9	8.1	1. Testing for Y2K compliance currently in process with NFC specialists. Y2K systems test on OS390 system successfully completed in February 1998. 2. Establish the Business Resumption Team to work directly with NFC Payroll Processing. 3. Develop Y2K Contingency Plan.	Dec 1998 Mar 1999 Sep 1998	1. The NFC payroll/ personnel system has capability to produce payment without submission of data for a limited period (as in "the furlough" of 1996). 2. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Key Support Processes
Responsible Group(s) - CFO

4.10 Process: Administrative and Management Information Systems

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.10.2	HUD automated systems for administrative functions such as: payroll and personnel, acquisitions, supply, budget, operations, and finance are inoperable due to Year 2000 related problems with automated systems. The automated systems that support these administrative processes are HUDCAPS (A75), PAS (A96) and NFC/PC-TARE (D43).	The last pay period in 1999 or 1/3/2000	.8	8	6.4	1. Develop Y2K Contingency Plan which explores alternative methods to make payments. 2. Complete renovations of all software used for administrative functions. 3. Establish the Administrative Functions Business Resumption Team.	Sep 1998 Sep 1998 Mar 1999	1. In the event any system performing designated administrative functions fails due to Year 2000 problems or outside forces, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing of payments will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Key Support Processes
Responsible Group(s) - CFO, OPC

4.10 Process: Administrative and Management Information Systems

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.10.3	HUD cannot pay contractors, and obligations made upon the award of a procurement instrument cannot be recorded. If the situation is prolonged, contractors may be forced to stop work, jeopardizing HUD's programs and even the operation and security of the building. These systems are TRACS (F87), AFS (F89A), PAS (A96), LOCCS (A67), HUDCAPS (A75), LAS (A21) and Treasury.	1/3/2000	.8	8	6.4	1. Develop Y2K Contingency Plan which explores four key items: a.) Alternative methods to make payments; b.) Length of time before tenant or service providers are at risk; c.) Timing of payments to recipients (making them early); d.) Paper copies sent to CFO from OPC. 2. Complete renovations of all software used to issue and track payments to HUD contractors. 3. Establish the Business Resumption Team to address the inability of HUD to pay and track contracted employees.	Sep 1998 Sep 1998 Mar 1999	1. In the event payments and records cannot be made due to a lack of automated support because of Year 2000 date problems, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing and tracking of payments and contracts will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Key Support Processes
Responsible Group(s) - OPC

4.10 Process: Administrative and Management Information Systems

[illegible]

Key Support Processes
Responsible Group(s) - OPC, CFO, Program Area Customers and FPDC

4.10 Process: Administrative and Management Information Systems

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.10.5	The HUD Procurement System (HPS) and related accounting systems to record the reservation and obligation of contract funds do not work. Once this interface is implemented, neither the reservation nor recording of the obligation of funds will be possible if HPS (A35) is not operational. OPC will also be unable to track work received, contract actions executed, and dollar amounts obligated. Accurate work tracking and management reporting will not be possible. Reporting to the Federal Procurement Data Center (FPDC), which is required by law, will not be possible.	1/3/2000	.3	9	2.7	1. Complete renovations of HPS and related accounting systems. 2. Develop Y2K Contingency Plan. 3. Establish the Business Resumption Team to handle issues relating to the HUD Procurement System.	Sep 1998 Sep 1998 Mar 1999	1. In the event the HPS System is inoperable due to a lack of automated support because of Year 2000 date problems, the Business Resumption Team will analyze the problem, make corrections and retest immediately. 2. Automated processing will be suspended until corrections are made. 3. The Business Resumption Team will implement the Year 2000 Contingency Plan.

Key Support Processes
Responsible Group(s) - OAMS, CFO and OPC

4.10 Process: Administrative and Management Information Systems

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.10.6	Government-Wide Commercial Credit Cards for purchasing and travel cannot be administered. Inability to administer the cards will mean only existing card holders would be able to make purchases and only within their current spending limits. The travel card replaces the Imprest Fund travel advance. The travel system will interface with the Travel Management Center (SATO) and will issue travel orders, prepare travel advances and reconcile the travel voucher. If it is not operational, travelers cannot travel.	1/3/2000	.5	5	2.5	1. Develop Y2K Contingency Plan 2. Establish the Business Resumption Team to handle Government-Wide Commercial Credit Card distribution.	Sep 1998 Mar 1999	1. The Business Resumption Team will implement the Year 2000 Contingency Plan. 2. Distribution of Government-Wide Commercial Credit Cards will be suspended until corrections are made.

Key Support Processes
Responsible Group(s) - OPC, Program Offices and CBD

4.10 Process: Administrative and Management Information Systems

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.10.7	HUD cannot submit electronic synopses of procurement needs through the Internet to the Department of Commerce for the Commerce Business Daily (CBD). The Department of Commerce's system, CBDNet supports this function. The synopsis is a key event; without it, the solicitation cannot be released.	1/3/2000	.2	10	2	1. Develop Y2K Contingency Plan to include testing other Internet sources for electronic submission and requesting CBD accept non-perfect format paper synopses. 2. Establish the Business Resumption Team to handle issues relating to the CBDNet.	Sep 1998 Mar 1999	1. The Business Resumption Team will implement the Year 2000 Contingency Plan. 2. Automated processing of CBDNet submissions will be suspended until corrections are made.

Key Support Processes
Responsible Group(s) - OPC and Program Offices

4.10 Process: Administrative and Management Information Systems

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.10.8	Customers and procurement staff cannot perform word processing, to create documents and spreadsheets.	1/3/2000	.1	2	.2	1. Develop Y2K Contingency Plan to include provisions for customers and procurement staff of stand-alone versions of word processing, standard RFS formats and common attachments loaded onto hard drives. 2. Establish the Business Resumption Team to handle issues relating to loss of word processing ability.	Sep 1998 Mar 1999	1. The Business Resumption Team will implement the Year 2000 Contingency Plan. 2. Automated processing will be suspended until corrections are made.

Key Support Processes
Responsible Group(s) - OPC, OGC

4.10 Process: Administrative and Management Information Systems

[illegible]

Major Infrastructure Systems

Responsible Group(s) - OAMS

4.11 Major Infrastructure Systems

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.11.1	HUD automated facilities systems are not functional without water, electrical or natural gas generated power. Widespread outages must be corrected before other contingencies can be addressed. Many, if not all, HUD buildings utilize these automated systems for such things as security, environmental control, and elevators, etc.	1/1/2000	.2	10	2	1. Develop contingency plans for headquarters buildings, program areas and HUD supported housing facilities. Include identification of buildings at significant risk and manual overrides or alternatives for building infrastructure systems. 2. Establish the Business Resumption Team and point of contact at each HUD location for manual overrides of applicable systems at the site. 3. Upgrade of Uninterruptible Power Source (UPS) for Headquarters computer center to increase capacity. 4. Test infrastructure systems January 1, 2000 to resolve	Sep 1998 Mar 1999 Jun 1999 Jan 2000	1. If HUD experiences utility outages at the local level, the Business Resumption Team will implement the Y2K contingency plan to route workloads to another service center. 2. If regional or national level outages are experienced, suspend HUD activities at locations without back-up power systems until utilities are restored. 3. In the event of power outage, UPS would supply power to the computers for several minutes until utility systems are restored by the local public utility

						any problems prior to opening for business January 3, 2000.		company. 4. Prolonged power outage would trigger a building evacuation. The computer system and data processing would remain unaffected.
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Major Infrastructure Systems *Responsible Group(s) - CSG*

4.11 Major Infrastructure Systems

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.11.2	HUD automated systems are not functional without data telecommunications. Widespread outages must be corrected before core business can be fully processed.	1/1/2000	.2	10	2	1. Develop Y2K Contingency Plan to address actions to take in case of data telecommunications outage. 2. Review local plans to address actions for local data telecommunications outages to ensure they are current and enforceable. 3. Establish the Data Telecommunications Outage Business Resumption Team. 4. Check and test back-up systems. 5. Test on Jan 1 and Jan 2, 2000.	Sep 1998 Dec 1998 Mar 1999 Jun 1999 Jan1 & 2 2000	1. If HUD experiences data telecommunications outages at the local level, the Business Resumption Team will implement the Y2K contingency plan to continue workloads from a battery-run service center. 2. If national level outages are experienced, conduct manual processes as appropriate and hold until data telecommunications are restored. For regional failures, workloads will be transferred from the Regional Centers to the National Centers.

Major Infrastructure Systems *Responsible Group(s) - CSG*

4.11 Major Infrastructure Systems

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.11.3	HUD relies on two computer centers to process its various business functions. Without these facilities, HUD's automated systems are not functional. Problems with this system must be corrected before core businesses can be fully processed.	1/1/2000	.2	10	2	1. Develop Y2K Contingency Plan to address actions to take in case HUD's two computer centers are not operational. 2. Review the Back-up and Recovery Plan to ensure it is current and enforceable. This plan defines the steps necessary to re-establish HUD's critical data processing and telecommunications capabilities in the event of a major outage. 3. Establish the Computer Center Business Resumption Team. 4. Check and test back-up systems.	Sep 1998 Dec 1998 Mar 1999 Jun 1999	1. If HUD experiences an extended outage at the national computer centers, implement the Back-up and Recovery Plan and hold data until one of the facilities is restored.

Major Infrastructure Systems
Responsible Group(s) - OAMS

4.11 Major Infrastructure Systems

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.11.4	HUD mail and package processing breaks down.	1/1/2000	.2	10	2	<p>1. Develop Y2K Contingency Plan to address actions to take in case of mail and package processing breakdown. This Plan will identify three key issues: 1) Alternative methods acceptable to the USPS for mail processing; 2) Alternative methods of sending packages and envelopes; 3) Alternative manifesting procedures for small package carriers.</p> <p>2. Establish Mail Processing Business Resumption Team.</p>	<p>Sep 1998</p> <p>Mar 1999</p>	<p>1. If HUD experiences a failure in postal equipment and/or in the automated package processing system the Business Resumption Team will implement the Y2K Contingency Plan.</p>

Major Infrastructure Systems
Responsible Group(s) - OAMS, CSG

4.11 Major Infrastructure Systems

	Risk/ Threat	Time Horizon To Failure	Business Priority			Risk Mitigation Strategy		Contingency and Triggers
			Risk Assessment	Impact	Score	Mitigation Strategy	Milestone Dates	
4.11.5	HUD automated systems are not functional without voice telecommunications. Widespread outages must be corrected before core business can be fully processed.	1/1/2000	.1	10	1	1. Develop Y2K Contingency Plan to address actions to take in case of voice telecommunications outage. 2. Review local plans to address actions for local voice telecommunications outages to ensure they are current and enforceable. 3. Establish the Voice Telecommunications Outage Business Resumption Team. 4. Check and test back-up systems.	Sep 1998 Dec 1998 Mar 1999 Jun 1999	1. If HUD experiences voice telecommunications outages at the local level, the Business Resumption Team will implement the Y2K Contingency Plan. 2. If regional or national level outages are experienced, CSG will issue cellular phones and OAMS will issue hand-held radios to key points of contact. 3. If internal outages are experienced, HUD will conduct manual processes using fax lines to voice telecommunications network.

5. Contingency Plan Testing

The objective of business continuity testing is to evaluate whether individual contingency plans are capable of providing the desired level of support to the Agency's core business functions. Testing will also validate whether a given plan can be implemented within a specified time period and will provide an opportunity to make necessary adjustments to the plan and to the environment within which the plan is tested – e.g., readiness of the facility to deliver service during a contingency. Finally, testing allows the opportunity for a detailed assessment of the cost of operating under a contingency.

Each responsible party will comprehensively test their plan or plans. While emphasis will be placed on those risks carrying the higher Business Priority Scores, all plans will be sufficiently tested to demonstrate their ability to allow business to be conducted during a contingency.

5.1 Test Guidelines and Environment

In order to ensure their validity, each plan will be reviewed and tested by the Business Resumption Teams within the guidelines set forth in the GAO's February 1998 Exposure Draft, *Year 2000 Computing Crisis: Business Process Continuity and Contingency Planning*. These guidelines include provisions for three levels: review, rehearsal and audit.

5.1.1 Review

The BPCCP will undergo HUD Executive Staff review, and the local contingency plans will be subject to the following review process.

At the local level, managers and specially convened work groups will develop local contingency plans that ensure Agency core business processes will continue, to the extent possible, during a Year 2000 triggered interruption. The iterative nature of the local plan development process ensures that optimum functionality and cost-beneficial alternatives are developed and selected. At each stage of development, the ability to provide acceptable levels of service delivery under various systems failure scenarios will be considered.

On completion, plans will be reviewed by the BPCCP team to see that all necessary elements are provided. These elements include, but are not limited to, provisions for staff, training, availability of supplies such as forms to be used when reverting to a manual process, availability of back-up facilities, availability of procedures and triggers for return to normal operations.

5.1.2 Rehearsal

There are two types of rehearsal – the desktop exercise and simulation.

5.1.2.1 Desktop Exercise

In the desktop exercise, the manager responsible for implementing a contingency plan will be advised of a hypothetical contingency situation. The manager, or his designee, will then use the plan to work out a response to the situation. The manager will answer questions that relate to the availability of trained staff, adequacy of the facilities, adequacy of the machines, and whether necessary forms and supplies are on hand. Adjustments will be made either to the plan or to the particular environment during this phase should any part of the plan fall short of its objective.

5.1.2.2 Simulation

Actual simulation takes the desktop exercise a step further. In actual simulation testing, a component or office (or part of an office) will conduct real business as if in a contingency situation. An example of this would be a field office required to process a sample insurance claim without having access to the automated claims system. The simulation will be thorough enough to assure the component manager that on-site personnel can handle the work, the necessary training has been carried out or scheduled, needed supplies are available, the facility can be adapted to the contingency, and the automated system can handle the resultant reconciliation once it is back up and running. At this point, any inadequacy in the plan or the office's preparation will be remedied in advance of an actual contingency situation.

5.1.3 Audit

To ensure objectivity in assessing the Agency's Year 2000 Contingency Plans, a contractor will conduct an independent verification and validation (IV&V) of the Year 2000 readiness process and the Business Process Continuity Contingency Plan. The IV&V consists of two phases. In the first phase the contractor will assess the adequacy, feasibility, and accuracy of HUD's Year 2000 plans, methodology, metrics and management information reports. The second phase will assess HUD's contingency strategy and plans. The IV&V will be carried out independent of HUD's Year 2000 Project Management Team. On conclusion, the contractor will provide a final report to the Deputy Director of Information Technology.

6. Process For Plan Updates

The BPCCP will be updated quarterly starting in the second quarter of fiscal year 1999. The quarterly revisions will reflect plan changes that occur as a result of changes in status of mitigation efforts, review of individual plans, and needed adjustments stemming from contingency plan testing.

All plan changes and updates to the printed Plan will be made by the BPCCP team coordinated through the Year 2000 Project Manager.

7. Definitions

Architecture - A description of all functional activities to be performed to achieve the desired mission, the system elements needed to perform the functions and the designation of performance levels of those system elements. An architecture also includes information on the technologies, interfaces, and location of functions and is considered an evolving description of an approach to achieving a desired mission.

Business Architecture - A description of the systems, databases, and interactions between systems and databases that will be needed to fulfill business requirements.

Business Continuity - The sum of an organization's businesses. It includes all of the core business functions which define the organization.

Business Continuity Plan - In the context of the Year 2000 program, the overall plan, including risk mitigation strategy, contingencies, and recovery, to ensure the organization's core business processes continue in spite of disruptions to infrastructure and/or support systems.

Business Function - A group of logically related tasks that are performed together to accomplish an objective.

Business Priority - A score derived by multiplying Risk Assessment and Impact ranging from 0 (low) to 10 (high). The score can help the organization determine areas of emphasis and where resources will be employed when it becomes obvious not all risks/threats can be mitigated.

Business Resumption Team - Team comprised of application system expertise and business analysts. This is a quick action team that will pinpoint the computer-related problem and bring subject matter experts in to correct the problem.

Contingency - Planned action(s) to eliminate or reduce the Impact of a Risk/Threat at or after the Time Horizon to Failure.

Contingency Plan - In the context of the Year 2000 program, a plan for responding to the loss or degradation of essential services due to a Year 2000 problem in an automated system. In general, a contingency plan describes the steps the enterprise would take including the activation of manual or contract processes, to ensure the continuity of its core business processes in the event of a Year 2000 induced system failure.

Day 1 Strategy - A risk-reduction strategy and procedures for the period between mid-November 1999 and mid-January 2000 that will be documented in a detailed Day 1 Plan.

Impact - The degree of effect on a whole number scale of zero (low) to 10 (high) that a risk/threat will have on the organization if it is not mitigated.

Infrastructure - The facilities, equipment, installations and support systems needed for the functioning of a system.

Interface - A boundary across which two systems communicate. An interface might be a hardware connector used to link to other devices, or it might be a convention used to allow communication between two software systems.

Magnetic Media - Tape, cartridges and floppy disks used for storing data.

Mission Critical System - A system supporting a core business function. These system are all Financial Systems Integration (FSI) and Business Resumption Plan (BRP) systems.

Risk Analysis - A combination of risk assessment and risk evaluation performed at a particular point in time.

Risk Assessment - An activity performed to identify risks and estimate their probability and the impact of their occurrence; it is used during system development to provide an estimate of damage, loss, or harm that could result from a failure to successfully develop individual system components.

Risk Evaluation - The process of determining the acceptability of risks.

Risk Management - A management approach designed to prevent and reduce risks, including system development risks, and lessen the impact of their occurrence.

Risk Mitigation - Action(s) taken to eliminate or reduce the Impact or likelihood of a risk/threat prior to the time horizon to failure.

Risk/Threat - Event or non-event having negative impact on or endangering a core business function or critical system of the organization.

Strategic Plan - A long-term, high-level plan that identifies broad business goals and provides a roadmap for their achievement.

System Infrastructure - The computer and communication hardware, software, databases, people, and policies supporting the enterprise's information management functions.

Test - The process of exercising a product to identify differences between the expected and actual behavior.

Test Facility - A computer system isolated from the production environment dedicated to the testing and validation of applications and system components.

Time Horizon to Failure - Date when the risk/ threat will first have impact.

Trigger - The event or events that cause a contingency plan to be implemented.

Validation - The process of evaluating a system or component during or at the end of the development process to determine whether it satisfies specified requirements.

Year 2000 Compliant - "...with respect to information technology, ...the information technology accurately processes date/time data (including, but not limited to, calculating, comparing and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations, to the extent that other information technology, used in combination with the information technology being acquired, properly exchanges date/time data with it." (48 CFR Part 39.002)